

Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

Listing of Claims

1. **(Currently Amended)** A method for promoting cell differentiation, the method comprising contacting pluripotent cells effective to form neuronal cells with a neuronal cell regulator selected from the group of colostrinin, a constituent peptide thereof, an active analog thereof, and combinations thereof, under conditions effective to change the pluripotent cells in morphology to form neuronal cells; wherein the active analog comprises a peptide having an amino acid sequence with at least about 15 percent proline and having at least about 70 percent ~~structural similarity~~ sequence identity to one or more constituent peptides of colostrinin, [[which are]] wherein a constituent peptide of colostrinin is selected from the group of SEQ ID NO:1 through SEQ ID NO:34, and wherein the pluripotent cells change in morphology to form neuronal cells.
2. **(Original)** The method of claim 1 wherein the cells are present in a cell culture, an organ, a tissue, or an organism.
3. **(Original)** The method of claim 1 wherein the cells are mammalian cells.
4. **(Original)** The method of claim 3 wherein the cells are human cells.
5. **(Canceled)**

6. **(Previously Presented)** The method of claim 1 wherein the neuronal cell regulator is a constituent peptide of colostrinin.

7. **(Previously Presented)** The method of claim 6 wherein the neuronal cell regulator is selected from the group of MQPPPLP (SEQ ID NO:1), LQTPQPLLQVMMEPQGD (SEQ ID NO:2), DQPPDVEKPDLPFQVQS (SEQ ID NO:3), LFFFLPVVNVLP (SEQ ID NO:4), DLEMPVLPVEPFPPFV (SEQ ID NO:5), MPQNFYKLPQM (SEQ ID NO:6), VLEMKFPPPPQETVT (SEQ ID NO:7), LKPFPKLKVEVFPFP (SEQ ID NO:8), VVMEV (SEQ ID NO:9), SEQP (SEQ ID NO:10), DKE (SEQ ID NO:11), FPPPK (SEQ ID NO:12), DSQPPV (SEQ ID NO:13), DPPPPQS (SEQ ID NO:14), SEEMP (SEQ ID NO:15), KYKLQPE (SEQ ID NO:16), VLPPNVG (SEQ ID NO:17), VYPFTGPIPN (SEQ ID NO:18), SLPQNILPL (SEQ ID NO:19), TQTPVVVPPF (SEQ ID NO:20), LQPEIMGVPKVKETMVPK (SEQ ID NO:21), HKEMPFPKYPVEPFTESQ (SEQ ID NO:22), SLTLTDVEKLHLPLPLVQ (SEQ ID NO:23), SWMHQPP (SEQ ID NO:24), QPLPPTVMFP (SEQ ID NO:25), PQSVLS (SEQ ID NO:26), LSQPKVLPVPQKAVPQRDMPIQ (SEQ ID NO:27), AFLLYQE (SEQ ID NO:28), RGPFPILV (SEQ ID NO:29), ATFNRYQDDHGEEILKSL (SEQ ID NO:30), VESYVPLFP (SEQ ID NO:31), FLLYQEPVLGPVR (SEQ ID NO:32), LNF (SEQ ID NO:33), and MHQPPQPLPPTVMFP (SEQ ID NO:34), and combinations thereof.

8. **(Previously Presented)** The method of claim 7 wherein the neuronal cell regulator is selected from the group of MQPPPLP (SEQ ID NO:1), LQTPQPLLQVMMEPQGD (SEQ ID NO:2), DQPPDVEKPDLPFQVQS (SEQ ID NO:3), LFFFLPVVNVLP (SEQ ID NO:4), DLEMPVLPVEPFPPFV (SEQ ID NO:5), MPQNFYKLPQM (SEQ ID NO:6), VLEMKFPPPPQETVT (SEQ ID NO:7), LKPFPKLKVEVFPFP (SEQ ID NO:8), and combinations thereof.

9. **(Currently Amended)** A method for promoting neuronal cell differentiation in a patient, the method comprising administering to the patient a neuronal cell regulator selected from the group of colostrinin, a constituent peptide thereof, an active analog thereof, and combinations thereof, under conditions effective to promote differentiation of pluripotent cells to form neuronal cells; wherein the active analog comprises a peptide having an amino acid sequence with at least about 15 percent proline and having at least about 70 percent ~~structural similarity~~ sequence identity to one or more constituent peptides of colostrinin, ~~[[which are]]~~ wherein the constituent peptide of colostrinin is selected from the group of SEQ ID NO:1 through SEQ ID NO:34, and wherein pluripotent cells differentiate to form neuronal cells.

10. **(Original)** The method of claim 9 wherein the patient is a human.

11. **(Previously Presented)** The method of claim 9 wherein the neuronal cell regulator is a constituent peptide of colostrinin.

12. **(Previously Presented)** The method of claim 11 wherein the neuronal cell regulator is selected from the group of MQPPPLP (SEQ ID NO:1), LQTPQPLLQVMMEPQGD (SEQ ID NO:2), DQPPDVEKPDLPFQVQS (SEQ ID NO:3), LFFFLPVVNVLP (SEQ ID NO:4), DLEMPVLPVEPFPPFV (SEQ ID NO:5), MPQNFYKLPQM (SEQ ID NO:6), VLEMKFPPPPQETVT (SEQ ID NO:7), LKPFPKLKVEVFPFP (SEQ ID NO:8), VVMEV (SEQ ID NO:9), SEQP (SEQ ID NO:10), DKE (SEQ ID NO:11), FPPPK (SEQ ID NO:12), DSQPPV (SEQ ID NO:13), DPPPPQS (SEQ ID NO:14), SEEMP (SEQ ID NO:15), KYKLQPE (SEQ ID NO:16), VLPPNVG (SEQ ID NO:17), VYPFTGPIPN (SEQ ID NO:18), SLPQNILPL (SEQ ID NO:19), TQTPVVVPPF (SEQ ID NO:20), LQPEIMGVPKVKETMVPK (SEQ ID NO:21), HKEMPFPKYPVEPFTESQ (SEQ ID NO:22), SLTLTDVEKLHLPLPLVQ (SEQ ID NO:23), SWMHQPP (SEQ ID NO:24), QPLPPTVMFP (SEQ ID NO:25), PQSVLS (SEQ ID NO:26), LSQPKVLPVPQKAVPQRDMPIQ (SEQ ID NO:27), AFLLYQE (SEQ ID NO:28),

RGPFPILV (SEQ ID NO:29), ATFNRYQDDHGEEILKSL (SEQ ID NO:30), VESYVPLFP (SEQ ID NO:31), FLLYQEPVLGPVR (SEQ ID NO:32), LNF (SEQ ID NO:33), and MHQPPQPLPPTVMFP (SEQ ID NO:34), and combinations thereof.

13. **(Previously Presented)** The method of claim 12 wherein the neuronal cell regulator is selected from the group of MQPPPLP (SEQ ID NO:1), LQTPQPLLQVMMEPQGD (SEQ ID NO:2), DQPPDVEKPDLPFQVQS (SEQ ID NO:3), LFFFLPVNVLP (SEQ ID NO:4), DLEMPVLPVEPFPFV (SEQ ID NO:5), MPQNFYKLPQM (SEQ ID NO:6), VLEMKFPPPPQETVT (SEQ ID NO:7), LKPFPKLKVEVFPFP (SEQ ID NO:8), and combinations thereof.

14. **(Currently Amended)** A method for treating damaged neuronal cells, the method comprising contacting nonfunctional neuronal cells with a neuronal cell regulator selected from the group of colostrinin, a constituent peptide thereof, an active analog thereof, and combinations thereof, under conditions effective to convert the damaged neuronal cells to functional neuronal cells; wherein the active analog comprises a peptide having an amino acid sequence with at least about 15 percent proline and having at least about 70 percent ~~structural similarity~~ sequence identity to one or more constituent peptides of colostrinin, [[which are]] wherein a constituent peptide of colostrinin is selected from the group of SEQ ID NO:1 through SEQ ID NO:34, [[and]] wherein the nonfunction is the result of neurodegeneration, and wherein damaged neuronal cells are converted to functional neuronal cells.

15. **(Currently Amended)** A method for treating damaged neuronal cells in a patient, the method comprising administering to the patient a neuronal cell regulator selected from the group of colostrinin, a constituent peptide thereof, an active analog thereof, and combinations thereof, under conditions effective to convert damaged neuronal cells to functional neuronal cells; wherein the active analog comprises a peptide having an amino acid sequence with at least about

15 percent proline and having at least about 70 percent ~~structural similarity~~ sequence identity to one or more constituent peptides of colostrinin, [[which are]] wherein a constituent peptide of colostrinin is selected from the group of SEQ ID NO:1 through SEQ ID NO:34, [[and] wherein the nonfunction is the result of neurodegeneration, and wherein damaged neuronal cells are converted to functional neuronal cells.

16. **(Currently Amended)** A method for promoting neuronal cell differentiation, the method comprising contacting pluripotent cells of the nervous system with a neuronal cell regulator selected from the group of colostrinin, a constituent peptide thereof, an active analog thereof, and combinations thereof, under conditions effective to change the pluripotent cells of the nervous system in morphology to form neuronal cells; wherein the active analog comprises a peptide having an amino acid sequence with at least about 15 percent proline and having at least about 70 percent ~~structural similarity~~ sequence identity to one or more constituent peptides of colostrinin, [[which are]] wherein a constituent peptide of colostrinin is selected from the group of SEQ ID NO:1 through SEQ ID NO:34.

17. **(Currently Amended)** A method for promoting neuronal cell differentiation in a patient, the method comprising administering to the patient a neuronal cell regulator selected from the group of colostrinin, a constituent peptide thereof, an active analog thereof, and combinations thereof, under conditions effective to promote differentiation of pluripotent cells of the nervous system to form neuronal cells; wherein the active analog comprises a peptide having an amino acid sequence with at least about 15 percent proline and having at least about 70 percent ~~structural similarity~~ sequence identity to one or more constituent peptides of colostrinin, [[which are]] wherein a constituent peptide of colostrinin is selected from the group of SEQ ID NO:1 through SEQ ID NO:34, and wherein pluripotent cells of the nervous system differentiate to form neuronal cells.